

Appl. No. 10/072,782  
Amdt. dated July 28, 2005  
Reply to Office Action of April 29, 2005  
Page 2

**IN THE CLAIMS:**

1. (Previously Presented) An apparatus, comprising:  
a server operating to receive and store at least one request to modify the behavior of an implantable medical device (IMD), the at least one request received from a programmer at a first location and created by a clinician via the programmer at a first selected time;  
a monitor at a second location remote from the first location and operating to receive the at least one request from the server, subsequently conduct a programming telemetry session with the IMD, verify a status of the IMD indicating that the at least one request safely complies with a current programming state of the IMD, and transmit the at least one request to the implantable medical device at a second selected time; and  
a bi-directional communications system communicatively coupling the server and the monitor.
2. (Previously Presented) The apparatus of claim 1, wherein the server further verifies that the clinician is authorized to submit the at least one request to the implantable medical device.
3. (Previously Presented) The apparatus of claim 2, wherein the bi-directional communication system is provides a secure communication link between the server and the monitor.
4. (Previously Presented) The apparatus of claim 1, wherein the monitor decrypts the at least one request.
5. (Previously Presented) The apparatus of claim 4, wherein the monitor transmits the at least one decrypted request to the implantable medical device using a radio frequency transmitter.

Appl. No. 10/072,782  
Amdt. dated July 28, 2005  
Reply to Office Action of April 29, 2005  
Page 8

6. (Previously Presented) The apparatus of claim 5, wherein the implantable medical device receives the at least one decrypted requests using a radio frequency receiver.

7. (Original) The apparatus of claim 1, wherein the second selected time is substantially later than the first selected time.

8. (Previously Presented) The apparatus of claim 4, wherein the monitor transmits the at least one decrypted requests to a plurality of implantable medical devices.

9. (Previously Presented) The apparatus of claim 8, wherein the server allows the clinician to submit requests to at least one of the plurality of implantable medical devices.

10. (Currently Amended) An apparatus, comprising:

a programmer for creating, at a first selected time, a plurality of requests to modify the operation of at least one of a plurality of implantable medical devices, wherein a clinician operates the programmer to create the plurality of requests;

a server at a first selected location operating to receive, store, and encrypt the plurality of requests, wherein the server verifies that the clinician is authorized to submit requests to the at least one of the plurality of implantable medical devices;

a monitor at a second selected location and remote from the programmer operating to receive and decrypt the plurality of requests from the server, conduct a telemetry session with a given implantable medical device and ~~verify~~ and an identity of the given implantable medical device, and transmit the requests to the at least one of the plurality of implantable medical devices at a second selected time subsequent to the first selected time; and

Appl. No. 10/072,782  
Amdt. dated July 28, 2005  
Reply to Office Action of April 29, 2005  
Page 4

a secure bi-directional communications system enabling the server and the monitor to exchange encrypted information.

11. (Original) The apparatus of claim 10, wherein the secure bi-directional communications system comprises a Virtual Private Network.

12. (Original) The apparatus of claim 10, wherein the secure bi-directional communications system comprises a Secure Socket Layer connection.

13. (Previously Presented) The apparatus of claim 10, wherein the monitor comprises a radio frequency transmitter that transmits the plurality of requests to the at least one of a plurality of implantable medical devices.

14. (Currently Amended) The apparatus of claim 13, wherein the at least one of the plurality of implantable medical devices comprises a ~~plurality of~~ radio frequency receivers that receive the requests from the monitor.

15. (Original) The apparatus of claim 10, wherein the second selected time is substantially later than the first selected time.

16. (Previously presented) A method, comprising:  
programming at a first selected time at least one request to modify the operation of an implantable medical device;  
storing the at least one request at a first selected location;  
transmitting the at least one request from the first selected location at a second selected time to a second selected location remote from a programmer used for programming the at least one request;  
conducting a telemetry programming session between the second selected location and the implantable medical device;

Appl. No. 10/072,782  
Amdt. dated July 28, 2005  
Reply to Office Action of April 29, 2005  
Page 5

verifying that the at least one request is safely compatible with a current state of the implantable medical device; and

transmitting the at least one request from the second selected location to the implantable medical device if the at least one request is safely compatible.

17. (Original) The method of claim 16, wherein programming comprises authorizing a clinician to create the at least one request.

18. (Original) The method of claim 17, wherein programming further comprises selecting the implantable medical device from among a plurality of implantable medical devices that the clinician is authorized to program.

19. (Previously Presented) The method of claim 16, wherein transmitting the at least one request from the first selected location to the second selected location comprises forming a secure communication link between the first selected location and the second selected location.

20. (Original) The method of claim 19, wherein forming a secure connection comprises forming a Virtual Private Network connection.

21. (Original) The method of claim 20, wherein forming a secure connection comprises forming a Secure Socket Layer connection.

22. (Previously Presented) The method of claim 19, wherein transmitting the at least one request from the first selected location further comprises encrypting the at least one request at the first location.

23. (Previously Presented) The method of claim 22, wherein transmitting the at least one encrypted request from the first selected location to the second selected location further comprises transmitting the encrypted request from the

Appl. No. 10/072,782  
Amdt. dated July 28, 2005  
Reply to Office Action of April 29, 2005  
Page 6

first selected location to the second selected location using the secure connection.

24. (Previously Presented) The method of claim 23, wherein transmitting the at least one request from the first selected location to the second selected location further comprises decrypting the at least one request at the second selected location.

25. (Previously Presented) The method of claim 24, wherein transmitting the at least one request from the first selected location to the second selected location comprises retrieving the at least one request at a second selected time that is substantially later than the first selected time.

26. (~~Previously presented~~Currently Amended) A method, comprising:  
creating, at a first selected time, at least one request to modify the operation of an implantable medical device using a programmer;  
storing the at least one request on a server at a first selected location;  
encrypting the at least one request on the server at a second selected time in response to notification that a monitor at a second location remote from the programmer is substantially ready to receive the request;  
transmitting the at least one encrypted request from the server to the monitor through a secure bi-directional communications network when a monitor at a second location is substantially ready to receive the at least one encrypted request;  
decrypting the at least one encrypted request on the monitor;  
establishing a telemetry programming session between the monitor and the implantable medical device;  
determining that a current state of the implantable medical device is safely compatible with the at least one request; and

Appl. No. 10/072,782  
Amdt. dated July 28, 2005  
Reply to Office Action of April 29, 2005  
Page 7

transmitting the at least one decrypted request from the monitor to the implantable medical device using a radio frequency transmitter, if the current ~~stated state~~ is safely compatible.

27. (Previously Presented) The method of claim 26, wherein creating the at least one request comprises authorizing a clinician to create a request;

28. (Previously Presented) The method of claim 26, wherein transmitting the at least one encrypted request from the server to the monitor through a secure bi-directional communications network comprises transmitting the at least one encrypted request through a Virtual Private Network.

29. (Previously Presented) The method of claim 26, wherein transmitting the at least one encrypted request from the server to the monitor through a secure bi-directional communications network comprises transmitting the at least one encrypted request through a Secure Socket Layer.

30. (Previously presented) A system, comprising:

a programmer for creating, at a first selected time, a plurality of requests to modify the behavior of at least one of a plurality of implantable medical devices that deliver therapies to at least one of a plurality of patients, wherein a clinician utilizes the programmer to create the requests;

a secure bi-directional communication network;

a server coupled to the bi-directional communication network at a first location and that receives, stores, and encrypts the requests, wherein the server also verifies that the clinician is authorized to submit requests to the at least one of the plurality of implantable medical devices; and

a plurality of monitors coupled to the bi-directional communication network at a plurality of second selected locations remote from the programmer to receive and decrypt the requests from the server, establish programming telemetry

Appl. No. 10/072,782  
Amdt. dated July 28, 2005  
Reply to Office Action of April 29, 2005  
Page 8

sessions with implantable medical devices, which requests to modify the behavior of the implantable medical device have previously been received by the implantable medical device, and transmit, any unreceived request to modify the behavior to the at least one of the plurality of implantable medical devices in an order created on the programmer.

31. (Original) The system of claim 30, wherein the bi-directional communications network comprises at least one of a telephone line, an intranet, an internet, a satellite, and a global positioning system.

32. (Original) The system of claim 30, wherein at least one of the plurality of second selected times is substantially later than the first selected time.